

## Symbols

- 8-207  
# 8-197  
\$ 8-198  
\* 8-208  
+ 8-207  
/ 8-208  
: 8-196  
< 8-211  
<= 8-211  
<> 8-209  
= 8-209  
> 8-210  
>= 8-210  
^ 8-209  
' 8-197

## A

ABS 8-212  
ACC 8-13  
ACCEL 8-231  
ACOS 8-212  
ADD\_DAC 8-14  
ADDAX 8-16  
ADDAX\_AXIS 8-231  
ADDRESS 8-128  
AFF\_GAIN 8-231  
AIN 8-92  
AIN0-3 8-93  
AINBIO-7 8-93  
Amplifier Enable 2-43  
AND 8-212  
AOUT0...3 8-93  
APPENDPROG 8-128  
Applications 1-16  
ASIN 8-213  
ATAN 8-214  
ATAN2 8-214  
ATYPE 8-232  
AUTORUN 8-128  
AXIS 8-19  
Axis Parameters 7-10  
AXIS\_ADDRESS 8-234

AXIS\_ENABLE 8-234  
AXIS\_MODE 8-235  
AXISSTATUS 8-235  
AXISVALUES 8-129

## B

B\_SPLINE 8-214  
BACKLASH 8-20  
BACKLASH\_DIST 8-236  
BASE 8-21  
BASICERROR 8-118  
BATTERY\_LOW 8-129  
BITREV8 8-198  
Board 12-8  
BOOST 8-237  
BOOT\_LOADER 8-130  
BREAK\_ADD 8-130  
BREAK\_DELETE 8-130  
BREAK\_LIST 8-131  
BREAK\_RESET 8-131

## C

CAD2Motion 10-83  
CAM 8-22  
CAMBOX 8-27  
CAN 8-131  
CAN 16-I/O Module 5-3  
CAN Analog Inputs 5-12  
CAN Connector 2-3, 2-31  
CAN Daughter Board 4-31  
CAN\_ENABLE 8-237  
CANCEL 8-36  
CANIO\_ADDRESS 8-133  
CANIO\_ENABLE 8-134, 8-135  
CANIO\_STATUS 8-134  
CANOPEN\_OP\_RATE 8-135  
CHANNEL\_READ 8-93  
CHANNEL\_READ/CHANNEL\_WRITE 8-94  
CHECKSUM 8-135  
CHR 8-94  
CLEAR 8-135  
CLEAR\_BIT 8-217  
CLEAR\_PARAMS 8-136  
CLOSE 8-95

CLOSE\_WIN 8-237  
CLUTCH\_RATE 8-237  
CmdProtocol 12-9  
Command Line Interface 7-14  
COMMSERROR 8-136  
COMMSTYPE 8-137  
Communications Protocols 13-1  
COMPILE 8-137  
CONNECT 8-38  
Connections to the Euro 205x 2-12  
CONSTANT 8-217  
CONTROL 8-138  
COPY 8-138  
COS 8-218  
CRC16 8-218  
CREEP 8-238  
CURSOR 8-95

## D

D\_GAIN 6-10, 8-238  
D\_ZONE\_MAX 8-239  
D\_ZONE\_MIN 8-239  
DAC 8-240  
DAC\_OUT 8-240  
DAC\_SCALE 8-241  
DATE 8-139  
DATE\$ 8-140  
DATUM 8-40  
DATUM\_IN 8-241  
Daughter board fitting 4-4  
Daughter Boards 1-11, 4-3  
    Daughter Boards 1-6  
DAY 8-140  
DAY\$ 8-140  
DEC 8-44  
DECEL 8-242  
DEFKEY 8-95  
DEFPOS 8-45  
DEL 8-140, 8-141  
DEMAND\_EDGES 8-242  
DEMAND\_SPEED 8-242  
DEVICENET 8-141  
Diagnostic Checklists 6-13  
DIP Switch Settings 5-6, 5-13

DIR 8-142  
DISABLE\_GROUP 8-47  
DISPLAY 8-142  
DLINK 8-143  
DocMaker 10-84  
DPOS 8-242  
DRIVE\_CLEAR 8-243  
DRIVE\_CONTROL 8-243  
DRIVE\_ENABLE 8-244  
DRIVE\_EPROM 8-244  
DRIVE\_HOME 8-244  
DRIVE\_INERFACE 8-245  
DRIVE\_INPUTS 8-244  
DRIVE\_MODE 8-245  
DRIVE\_MONITOR 8-245  
DRIVE\_READ 8-246  
DRIVE\_RESET 8-246  
DRIVE\_STATUS 8-246  
DRIVE\_WRITE 8-247

## E

EDIT 8-147  
EDPROG 8-147  
ELSE 8-118  
ELSEIF 8-118  
EMC 3-10  
ENABLE\_OP 8-96  
ENCODER 8-247  
Encoder Connections 4-11  
ENCODER\_BITS 8-247  
ENCODER\_CONTROL 8-248  
ENCODER\_ID 8-249  
ENCODER\_RATIO 8-50  
ENCODER\_READ 8-249  
ENCODER\_STATUS 8-249  
ENCODER\_TURNS 8-249  
ENCODER\_WRITE 8-250  
ENDIF 8-119  
ENDMOVE 8-250  
ENDMOVE\_BUFFER 8-250  
ENDMOVE\_SPEED 8-251  
Environmental Considerations 3-9  
EPROM 8-148  
Error Codes 5-8

Error Types 1-10  
ERROR\_AXIS 8-149  
ERROR\_LINE 8-198  
ERRORMASK 8-251  
ETHERNET 8-149  
Ethernet Daughter Board 4-37, 4-39  
ETHERNET\_IP 8-151  
Euro205x 2-10  
Euro209 2-20  
Euro209 - Feature Summary 2-28  
EX 8-151  
EXECUTE 8-151, 8-152  
EXP 8-219

## F

FALSE 8-229  
FAST\_JOG 8-252  
FASTDEC 8-252  
FB\_SET 8-152  
FB\_STATUS 8-153  
FE 8-252  
FE\_LATCH 8-252  
FE\_LIMIT 8-253  
FE\_LIMIT\_MODE 8-253  
FE\_RANGE 8-253  
FEATURE\_ENABLE 8-153  
FEGRAD 8-254  
FEMIN 8-254  
FHOLD\_IN 8-254  
FHSPEED 8-255  
Fibre-optic cables 14-4  
Fibre-Optic Network 14-1  
FILE 8-96  
FLAG 8-98  
FLAGS 8-99  
FLASHVR 8-154  
FLASHVR() 8-154  
FOR 8-120  
FORCE\_SPEED 8-255  
FORWARD 8-52  
FRAC 8-219  
FRAME 8-155  
FREE 8-156  
FS\_LIMIT 8-256

FULL\_SP\_RADIUS 8-256  
FWD\_IN 8-257  
FWD\_JOG 8-257

## G

Gains 6-8  
GET 8-99  
GET# 8-100  
GetConnectionType 12-7  
GetData 12-29  
GLOBAL 8-219  
GOSUB 8-121  
GOTO 8-122

## H

HALT 8-156  
HEX 8-101  
HLM\_COMMAND 8-157  
HLM\_READ 8-159  
HLM\_STSTATUS 8-160  
HLM\_TIMEOUT 8-160  
HLM\_WRITE 8-161  
HLS\_MODAL 8-162  
HLS\_NODE 8-162  
HostAddress 12-8

## I

I\_GAIN 6-10, 8-257  
IDLE 8-126  
IEEE\_IN 8-217, 8-219, 8-220  
IEEE\_OUT 8-220  
IN 8-101  
INCLUDE 8-163  
INDEVICE 8-199  
INITIALISE 8-163  
INPUT 8-102  
INPUTS0/INPUTS1 8-103  
Installation 3-1, 12-3  
INT 8-221  
INTEGER\_READ/INTEGER\_WRITE 8-222  
INVERT\_IN 8-103  
INVERT\_STEP 8-258  
IsOpen 12-6

### J

JOGSPEED 8-258

### K

KEY 8-103

### L

LAST\_AXIS 8-164

LENZE 5-8

LIMIT\_BUFFERED 8-258

LINKAX 8-259

LINPUT 8-104

LIST 8-164

LIST\_GLOBAL 8-164

LN 8-222

LOAD\_PROJECT 8-165

LOADED 8-126

LOADSYSTEM 8-165

LOCK 8-166

LOOKUP 8-199

### M

MARK 8-259

MARKB 8-259

MC Simulation 10-75

MC\_TABLE 8-167

MC\_VR 8-167

MC206X 2-29

MC224 2-39

MC302X 2-2

Membrane Keypad 5-17

MERGE 8-260

MHELICAL 8-54

MHELICALSP 8-57

MICROSTEP 8-260

Mini-Membrane Keypad 5-20

MOD 8-223

MODBUS RTU 13-3

Module Interconnection 3-9

MOTION 8-167

Motion Perfect 10-3

Analogue Input Viewer 10-46

Axis Parameters 10-26

Breakpoints 10-62

CAN I/O Status 10-15

Card Support 10-20

Connecting to a Controller 10-5

Control Panel 10-49

Controller Configuration 10-14

Controller Menu 10-12

Creating and Running a program 10-54

Debugger 10-61

Desktop 10-10

Digital IO Status 10-44

Editor 10-55

Ethernet Configuration 10-16

External Tools 10-47

Feature Enable 10-17

Flash Eprom 10-67

Flashstick Support 10-19

Jog Axes 10-41

Keypad

Emulation 10-38

Loading System Software 10-21

Lock/Unlock Controller 10-23

Main Menu 10-11

Making programs run automatically 10-66

Options

CAN Drive 10-72

Communications 10-68

CX-Drive Configuration 10-73

Diagnostics 10-72

Editor 10-71

FINS Configuration 10-73

General 10-71

Menu 10-68

Program Compare 10-73

Terminal Font 10-72

Oscilloscope 10-29

Project Check Options 10-7

Project Check Window 10-6

Projects 10-6

Running for the first time 10-5

Running Programs 10-64

Running Without a Controller 10-75

Saving the Desktop Layout 10-73

Setting Powerup Mode 10-66

System Requirements 10-4

Table/VR Editor 10-40

Terminal 10-25

Tools 10-24

MOTION\_ERROR 8-167

MOVE 8-57

MOVEABS 8-59

MOVEABSSP 8-62

MOVECIRC 8-63

MOVECIRCSP 8-65

MOVELINK 8-66

MOVEMODIFY 8-71

MOVES\_BUFFERED 8-261

MOVESP 8-75

MOVETANG 8-77

MPE 8-167

MPOS 8-261

MSPEED 8-262

MSPHERICAL 8-75

MTYPE 8-262

## N

N\_ANA\_OUT 8-168

NAIO 8-169

NETSTAT 8-169

Network

    Programming 14-6

    Specification 14-12

NEW 8-169

NEXT 8-120, 8-122

NIO 8-170

NOT 8-223

NTYPE 8-263

## O

OFF 8-229

OFFPOS 8-263

ON 8-229

ON .. GOSUB 8-122

ON .. GOTO 8-123

OnBufferOverrunChannel5/6/7/9 12-31

OnReceiveChannel5/6/7/ 12-31

OP 8-105

OPEN 8-107

OPEN\_WIN 8-264

Operator Interfaces 1-11, 5-16

OR 8-223

OUTDEVICE 8-200

OUTLIMIT 8-264

Output Velocity Gain 6-11

OV\_GAIN 6-11, 8-265

## P

P\_GAIN 6-10, 8-265

Packaging

    Mounting 3-8

PEEK 8-170

PI 8-229

PMOVE 8-200

POKE 8-170

PORT 8-170

POWER\_UP 8-171

PP\_STEP 8-266

PRINT 8-108

PRINT# 8-109

PROC 8-200

PROC\_LINE 8-201

PROC\_MODE 8-201

PROC\_STATUS 8-201

PROCESS 8-171

Process Numbers 7-11

Process Parameters 7-10

PROCNUMBER 8-201, 8-202

Products 1-5

    I/O Expansion options 1-10

    Master Controllers 1-5

PROFIBUS 8-171

Profibus Daughter Board 4-38

Programming 7-1

Programming Examples 9-1

Project Autoloader 10-79

Project Encryptor 10-79

PROTOCOL 8-172

PSWITCH 8-110

## R

RAPIDSTOP 8-80

READ\_BIT 8-224

READ\_OP 8-112  
READPACKET 8-112  
REG\_POS 8-266  
REGIST 8-83  
REGIST\_SPEED 8-87  
REMAIN 8-267  
REMOTE 8-172  
RENAME 8-172  
REP\_OPTION 8-268  
REPDIST 8-268  
REPEAT 8-123  
RESET 8-202  
RETURN 8-124  
REV 8-269  
REV\_IN 8-268  
REV\_JOG 8-269  
REVERSE 8-88  
RS\_LIMIT 8-269  
RS232\_SPEED\_MODE 8-173  
RUN 8-173  
RUN\_ERROR 8-202  
RUNTYPE 8-174

## S

SCOPE 8-175  
SCOPE\_POS 8-176  
SELECT 8-176  
SEND 8-113  
SendData 12-30  
SERCOS 8-176  
SERCOS Daughter Board 4-33  
SERCOS\_PHASE 8-181  
Serial Cables 2-41  
Serial Port 2-18, 2-35, 2-42  
SERIAL\_NUMBER 8-182  
SERVO 8-269  
Servo Gains 6-8  
Servo Loop 6-12  
SERVO\_PERIOD 8-182  
SET\_BIT 8-225  
SETCOM 8-114  
SGN 8-225  
SHIFTR 8-202  
SIN 8-225

SLM 8-143  
SLM Daughter Board 4-34  
SLOT 8-182  
SPEED 8-270  
SPHERE\_CENTRE 8-270  
SQR 8-227  
SRAMP 8-270  
STEP 8-120, 8-183  
STEP\_RATIO 8-90  
STEPLINE 8-183  
STICK\_READ 8-184  
STICK\_WRITE 8-185  
STOP 8-184  
STORE 8-186  
STRTOD 8-203  
SYNC\_TIMER 8-187  
System Building 1-12  
System Parameters 7-10

## T

TABLE 8-187  
TABLE\_POINTER 8-204  
TABLEVALUES 8-188  
TAN 8-227  
TANG\_DIRECTION 8-271  
Testing Standards 3-11  
THEN 8-124, 8-181, 8-184  
TICKS 8-206  
TIME 8-189  
TIME\$ 8-189  
TIMER 8-116  
TO 8-120, 8-124  
TRANS\_DPOS 8-271  
TRIGGER 8-189  
TROFF 8-190  
TRON 8-190  
TRUE 8-230  
TSIZE 8-190  
Typical applications 1-16

## U

UNITS 8-272  
UNLOCK 8-191  
UNTIL 8-123, 8-125, 8-126

USB 8-191

USB\_HEARTBEAT 8-192

USB\_STALL 8-193

Using the MC loader ActiveX Contro 11-1

Using the PC Motion ActiveX Control 12-1

## V

VECTOR\_BUFFERED 8-272

VERIFY 8-273

VERSION 8-193

VFF\_GAIN 6-11, 8-274

VIEW 8-193

VP\_SPEED 8-274

VR 8-194

VRSTRING 8-195

## W

WA 8-125

WAIT 8-126

WAIT IDLE 8-126

WAIT LOADED 8-126

WAIT UNTIL 8-126

WDOG 8-195

WDOGB 8-196

WEND 8-127

WHILE 8-127

## X

XOR 8-227

